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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/060,163	02/01/2002	Koichi Kasahara	111878	7536
25944	7590	10/17/2003	EXAMINER	
OLIFF & BERRIDGE, PLC			ILDEBRANDO, CHRISTINA A	
P.O. BOX 19928			ART UNIT	PAPER NUMBER
ALEXANDRIA, VA 22320			1725	

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/060,163	KASAHARA ET AL.	
	Examiner	Art Unit	
	Christina Ildebrando	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

P riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species B, claims 7-11 is acknowledged.

The traversal is on the ground(s) that the two species are related such that examination of both groups would not cause an undue burden of search. This is not found persuasive.

With reference to MPEP § 806.04, where there is no disclosure of relationship between species, they are independent inventions and election of one invention following a requirement for restriction is mandatory even though applicant disagrees with the examiner. There must be a patentable difference between the species as claimed. Since the claims are directed to independent inventions, restriction is proper pursuant to 35 U.S.C. 121, and it is not necessary to show a separate status in the art or separate classification. It is the position of the examiner that the two species are patentably distinct because they require different components and a different arrangement of materials. Applicant has not presented any evidence or argument to demonstrate that the two species are clearly unpatentable, i.e. obvious, over each other. Burden of search is not relevant to the election of species requirement at issue.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-6 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. in view of Tanaka et al.

Yamamoto et al. (US 6,047,544) discloses a catalyst composition useful in the purification of exhaust gases. The reference teaches a catalyst composition comprising a monolithic substrate, a first layer comprising a zeolite hydrocarbon adsorbent formed on the substrate, and a catalyst layer comprising any one of palladium, platinum, and rhodium as a three-way catalyst (column 1, line 62 – column 2, line 5). The catalyst layer is loaded on the hydrocarbon adsorbent layer (refer to Fig. 2 and column 5, lines 30-55). An example of a suitable zeolite is beta zeolite (column 2, line 6). It is taught that the catalyst layer suitable contains alumina to improve the stability of the layer (considered to meet the refractory inorganic oxide claimed herein) (column 7, lines 10-15). It is further taught that cerium oxide, combined with 1-40 mole % of any of zirconium, neodymium, or lanthanum is added to the catalyst layer as an oxygen storage component (column 7, lines 25-45). Finally, it is taught that suitable substrate materials include heat resistant materials such as cordierite or ferrite stainless steel (column 8, lines 13-16).

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The difference between the reference and the claims is that the reference does not disclose a Ce-Zr-Y composite oxide, as required by instant claim 7.

Tanaka et al. (US 5,837,642) discloses a catalyst composition useful in the purification of exhaust gases. Tanaka et al. teaches a heat resistant oxide having a formula $\text{Ce}_{1-(x+y)}\text{Zr}_x\text{R}_y\text{O}_{2-z}$ where R represents a rare earth metal, z represents an oxygen deficiency, x represents an atomic ratio of 0.15-0.70, y represents an atomic ratio of 0.05 to 0.25 and x+y represents a range of 0.20-0.95 (column 1, lines 53-60). It is taught that R is preferably yttrium (column 2, lines 20-31 and the Examples). Tanaka et al. teaches that the composite oxide may be employed as a three way catalyst in combination with a noble metal such as platinum, palladium, and rhodium (column 2, lines 1-5 and column 4, lines 15-25). Tanaka et al. suggests that the combination of Ce, Zr, and a rare earth metal such as yttrium, offers advantages over conventional materials such as Ce in combination with Zr or La in that it is highly active even in fluctuating gas atmospheres and high temperatures and retains a high oxygen storage capacity (column 1, lines 20-45, column 3, lines 1-10, and column 5, lines 1-8).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the catalyst composition taught by Yamamoto et al. to include the Ce-Zr-Y composite oxide taught by Tanaka et al. Tanaka et al. teaches that there are advantages to the use of a Ce-Zr-Y composite oxide in a three way catalyst composition as opposed to the conventional cerium oxide compositions containing zirconium or lanthanum taught by Yamamoto et al., such as high activity and high oxygen storage capabilities. One of ordinary skill would have been motivated to

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substitute the Ce-Zr-Y composite oxide taught by Tanaka et al. for the conventional materials taught by Yamamoto et al. in light of these advantages. Because both compositions can be used to purify exhaust gases, one would have a reasonable expectation of success from the combination.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

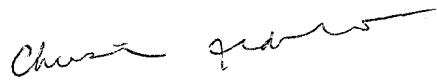
Kasahara et al. (US 2003/0153453), Voss et al. (US 2003/0108465), Faber (US 6,413,898), Tanaka et al. (US 6,261,989), and Wan (US 5,057,483) all disclose catalyst compositions useful in the purification of exhaust gases.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Ildebrando whose telephone number is (703) 305-0469. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (703) 308-3318. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.


Christina Ildebrando
Patent Examiner
Art Unit 1725

10/14/03

CAI
October 14, 2003